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SAP/BLAKELY
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
IWARERE, OLUSEYE	

ART UNIT	PAPER NUMBER
3687	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,409	ZHANG ET AL.	
	Examiner	Art Unit	
	OLUSEYE IWARERE	3687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Amendment received on March 22, 2008 has been acknowledged. Newly amended claim 2 has been entered. Therefore, claims 1 – 19 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4, 5, 7 – 10, 13 – 16, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Arunapuram et al. (2002/0019759).

As per claim 1, Arunapuram et al. teaches, an apparatus comprising:

a demand order module including a set of products to be shipped to a target location ([0034]; via specifically, referring to FIG. 2, after shipping orders are received 201, a first manager module);

an order guideline module including a set of constraints for a shipment from one of a set of a source locations to the target location ([0034]; via the problem-solver ("PS") module 300 of FIG. 3, plans at step 202 optimal freight movements between a initial pick-up location and a final drop-off location);

a route determination module to select the set of source locations having the set of products based on a cost factor and a utilization of a capacity of a set of transports

([0034]; via finally, at step 204, a third manager module, the freight payment ("FP") module 500 of FIG. 5, accounts for incurred costs for the executed freight movements, allocates the costs to orders received in step 201) ([0018] Lowest-cost alternatives are then identified to make the planned freight movements. Throughout the above functions, the problem-solver generates the most efficient load consolidations and makes the least-costly carrier and private fleet assignments within the constraints imposed by the orders and the transportation planning manager);

and a processing device to execute the route determination module ([0034]; via at step 203, the optimal freight movements are planned in step 202 are executed and tracked by a second manager module, the execution ("EX") module 400 of FIG. 4).

As per claim 2, Arunapuram et al. teaches, further comprising:

a storage device to store at least one of the demand order module, the guideline module, and the route determination module ([0007]; via the parcel ID and its location information are then transmitted by the host computer to one or more web servers, each including a database for storing a record of the parcel ID's scanned at each location).

As per claim 4, Arunapuram et al. teaches, a method comprising:

identifying a set of source locations having a set of desired resources for a target location ([0034]; via the problem-solver ("PS") module 300 of FIG. 3, plans at step 202 optimal freight movements between a initial pick-up location and a final drop-off location).

prioritizing a set of shipping rule groups based on a cost factor associated with the set of source locations and the target location ([0055]; via a particularly advantageous feature of the present invention involves the use of priority routing rules in the PS database that enable a transportation planning manager to influence the creation of loads and freight movements when lowest cost is not the most important consideration);

and selecting a subset of the set of source locations and a subset of the shipping rule groups based on the cost factor and a utilization of a capacity of a set of transports ([0055]; via typically, after it identifies all potential suitable freight movements for each order, the PS logic identifies the lowest cost transportation solution).

As per claim 5, Arunapuram et al. teaches, wherein selecting comprises:

searching iteratively through the set of shipping rule groups ([0113]; Once received, carriers can review tender offers and electronically provide an acceptance or decline (the EX monitoring this acceptance/decline communication at step 606) of the tender offer to the execution module 400 via response interface 412. The EX logic can then re-route any declined orders back to the problem-solver module 300 as unexecuted orders 411 through unexecuted freight movement interface 410 for selection of a different carrier or transportation solution. Fig. 6 also illustrates iterative searching through a control loop) in order of priority for a shipping solution ([0055]; A particularly advantageous feature of the present invention involves the use of priority routing rules in the PS database that enable a transportation planning manager to

influence the creation of loads and freight movements when lowest cost is not the most important consideration).

As per Claim 7, Arunapuram et al. teaches, wherein the set of shipping rule groups includes a default group of shipping rules ([0057]; via These rates are specified in a plurality of tables which are stored in the PS database 402 for use during batch runs. such rate tables are stored therein for each carrier type).

As per claim 8, Arunapuram et al. teaches, wherein the utilization of the capacity of the set of transports is a maximum utilization ([0058]; via when the PS logic begins its batch run at step 603 to generate an optimal freight movement plan (for all orders received since its last batch run) it performs several sub-steps which are detailed in FIG. 7).

As per claim 9, Arunapuram et al. teaches, further comprising:

altering a size of a shipment to utilize a maximum capacity of the set of transports ([0059]; via during a batch run, the problem-solver logic 301 first consolidates various orders and shipments into transportation loads at sub-step 701. Then, a determination is made at sub-step 702 for each load as to the best shipping mode).

As per claim 10, Arunapuram et al. teaches, an apparatus comprising:

a means for determining a set of source locations of a set of resources ([0054]; via define route planning rules, create templates that define legs for multiple leg routes and multiple mode routes (the entering of such templates, while done at step 601));

a means for ordering a set of shipping rule groups and a subset of source locations based on a cost of shipping to a target location from the set of source locations ([0059]; via the system uses various types of information including data detailing the required freight movements, tables itemizing resource availability and cost, operational requirements of the industry, and general company rules and policies entered by the company's transportation planning manager);

and a means for selecting a subset of shipping rule groups and a subset of source locations ([0010]; This functionality would also allow an organization to dynamically select crossdock and pool point locations (i.e., transportation hubs or through-points) based upon the organization's business requirements and costs) based on the cost of shipping the set of resources from a subset of the set of source locations to the target location and utilization of a set of transports ([0055]; via a particularly advantageous feature of the present invention involves the use of priority routing rules in the PS database that enable a transportation planning manager to influence the creation of loads and freight movements when lowest cost is not the most important consideration);

As per claim 12, Arunapuram et al. teaches, wherein the set of shipping rule groups includes a default shipping rule group ([0054]; via transportation planning

managers can, for example, by using the manager interface 404, define route planning rules, create templates that define legs for multiple leg routes and multiple mode routes (the entering of such templates, while done at step 601 prior to a batch run, will be discussed in detail below with respect to step 603).

As per claim 13, Arunapuram et al. teaches, further comprising:

a means for determining all source locations having the set of resources ([0034]; via the problem-solver ("PS") module 300 of FIG. 3, plans at step 202 optimal freight movements between a initial pick-up location and a final drop-off location).

As per claim 14, Arunapuram et al. teaches, a machine readable medium containing therein a set of instructions which when executed cause a machine to perform a set of operations comprising (pg 18, col. 1, lines 59 - 61; via program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for managing transportation operations for a plurality of orders):

identifying a set of source locations having a set of products for a target location (pg 18, col. 1, lines 64 - 65; via planning a freight movement between a initial pick-up location and a final drop-off location);

prioritizing a set of order guidelines based on a cost factor for shipping the set of products from the set of source locations to the target location (pg 18, col. 2, lines 6 - 10; via wherein said planning step comprises the sub-steps of generating a plurality of

potential freight movements to satisfy each order and identifying the lowest cost freight movement from said plurality of potential freight movements);

and determining a subset of order guidelines and a subset of source locations (([0010]; This functionality would also allow an organization to dynamically select crossdock and pool point locations (i.e., transportation hubs or through-points) based upon the organization's business requirements and costs) based on the cost factor and utilization of a capacity of a set of transports (pg 18, col. 2, lines 49 - 52; via wherein said accounting step comprises the sub-steps of receiving invoices from carriers for executed freight movements, allocating actual costs detailed in said invoices to orders).

As per claim 15, Arunapuram et al. teaches, the machine readable medium of claim 14, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising (pg 18, col. 1, lines 59 - 61; via program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for managing transportation operations for a plurality of orders):

searching iteratively through the set of order guidelines in order of priority for a shipping solution (pg 18, col. 2, lines 13 - 15; via wherein said plurality of potential freight movements are of types selected from the group consisting of direct routes from origin to destination).

As per claim 16, Arunapuram et al. teaches, the machine readable medium of claim 14, wherein the set of order guidelines includes a default order guideline (pg 18, col. 2, lines 43 – 46; via wherein said status updates are used to automatically update records contained in an order database, said database being accessible by customers, carriers, and locations to review the status of select orders).

As per claim 18, Arunapuram et al. teaches, wherein no product of the set of products is associated with more than one default order guideline ([0038]; via orders received through the order interface 306 have a single origin/destination pair).

As per claim 19, Arunapuram et al. teaches, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising (pg. 18, col. 1, lines 59 - 61; via program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for managing transportation operations for a plurality of orders):

altering a size of a shipment to utilize a maximum capacity of the set of transports (pg. 19, col. 2, lines 3 - 7; via wherein said problem-solver constructs said optimal freight movements in batch runs, and wherein said batch runs comprise generating a plurality of potential freight movements to satisfy each order).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 3, 6, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arunapuram et al. (2002/0019759) in view of Cappellini (2003/0014286).

As per claim 3, Arunapuram et. al. discloses the claimed invention but fails to explicitly disclose, a loading module to simulate a loading of the shipment of the set of products into the set of transports.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of a loading module to simulate a loading of the shipment of the set of products into the set of transports ([0181]; in the preferred embodiment, it is a multidimensional spatial system capable of handling the three dimensions of a physical object, i.e. the width, length and height and the coordinate position within a predetermined space, for example a container) ([0182]; These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space.) ([0183]; Apart from performing loading operations and optimizations, this type of application can be used or easily adapted for the sole simple use of determining availability of space or capacity, for a new required transport capacity, i.e. to check if a load can conveniently fit in a transporting container that is empty or partially full with other loads).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transportation planning, execution and freight payment manager method of Arunapuram, to include the simulation of loading shipments taught by Cappellini in order to evaluate the feasibility of a shipping arrangement.

As per claim 6, Arunapuram et. al. discloses the claimed invention but fails to explicitly disclose, wherein selecting comprises:

simulating iteratively until the set of desired resources is loaded into the set of transportation units.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of simulating iteratively the fulfillment of each group of the set of shipping rules in priority order until the set of desired resources is loaded into the set of transportation units ([0712] In the search to find a possible combination, the system now repeats the processes of FIG. 7 which were applied to an origin-destination pair, to every combination of origin-related first generation path waypoints) ([0182] These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transportation planning, execution and freight payment manager method of Arunapuram, to include the iterative simulation of loading shipments taught by Cappellini in order to find the most desired shipping arrangement.

As per claim 11, Arunapuram et al. discloses the claimed invention but fails to explicitly disclose a means for simulating the loading of the set of transports.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of a means for simulating the loading of the set

of transports([0181]; in the preferred embodiment, it is a multidimensional spatial system capable of handling the three dimensions of a physical object, i.e. the width, length and height and the coordinate position within a predetermined space, for example a container) ([0182]; These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space.) ([0183]; Apart from performing loading operations and optimizations, this type of application can be used or easily adapted for the sole simple use of determining availability of space or capacity, for a new required transport capacity, i.e. to check if a load can conveniently fit in a transporting container that is empty or partially full with other loads).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the _ of Arunapuram, to include the simulation of loading shipments taught by Cappellini in order to evaluate the feasibility of a shipping arrangement.

As per claim 17, Arunapuram et. al. discloses the claimed invention but fails to explicitly disclose, wherein selecting comprises:

simulating iteratively until the set of desired resources is loaded into the set of transportation units.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of simulating iteratively the fulfillment of each

group of the set of shipping rules in priority order until the set of desired resources is loaded into the set of transportation units ([0712] In the search to find a possible combination, the system now repeats the processes of FIG. 7 which were applied to an origin-destination pair, to every combination of origin-related first generation path waypoints) ([0182] These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transportation planning, execution and freight payment manager method of Arunapuram, to include the iterative simulation of loading shipments taught by Cappellini in order to find the most desired shipping arrangement.

Response to Arguments

7. Applicant's arguments filed 03/06/2008 have been fully considered but they are not persuasive.

Applicant first argues "the above-mentioned 'crossdock and pool point locations (i.e., transportation hubs or through-points)' identified in paragraph 0010 of Arunapuram et al. are intermediate location points in which freight moves from an "initial pick-up location" to a "final drop-off location" Therefore, any selection of the intermediate points of a route fails to disclose the selecting of source locations because these points are not

the source locations, as they are not originating points for the products and accordingly are not sources.

Second, there is no indication in the cited reference that any of the three manager modules select source locations. While an "initial pick-up location" is a source of products, this location is not selected by the modules of the cited reference. Information setting forth the "initial pick-up location" and "final drop-off location" are provided to the modules and fixed, leaving the modules to determine and implement the routes between them. Therefore, Arunapuram et al. does not describe "a route determination module to select the set of source locations having the set of products based on a cost factor and a utilization of a capacity of a set of transports" (emphasis added). The Examiner respectfully disagrees.

It is noted in the prior art, the proposed carriers are set by the problem-solver module, therefore the selection is made by the problem-solver itself ([0018]; A route planning manager, in the form of a problem-solver module, uses a sophisticated load building algorithm as herein described to identify and compare possible alternative freight movements from various potential route and stop sequences, modes of transport, and carriers. The decision making rules and information the problem-solver uses to make optional decisions regarding pending transportation orders derives from business parameters that a transportation planning manager establishes for the system and from carrier availability and rate table information provided by external or fleet carriers). Arunapuram et al. also further discloses determining to select the set of source locations ([0010]; This functionality would also allow an organization to

dynamically select crossdock and pool point locations (i.e., transportation hubs or through-points).

These locations are referred to by the Applicant as "intermediate locations", however these locations are indeed source locations because they are locations where the products are originating from before movement. As the claims are written, source locations do not exclude these locations referred to in [0018] and [0010] in the prior art.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUSEYE IWARERE whose telephone number is (571)270-5112. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on (571)272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elaine Gort/
Primary Examiner, Art Unit 3687

OI